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AUTHOR Bean, Rita M.; And Others
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ABSTRACT

This paper presents findings of a study that evaluated the impact and institutionalization of Project READ/Inquiring School, a school-reform project for systemic change. The product of collaboration between the University of Pittsburgh and several school districts in western Pennsylvania, the project's goals are: (1) to help schools build literacy programs; and (2) to promote systemwide change through professional collaboration across grades and shared decision making in curriculum planning. Methodology included observations, focus group interviews, interviews with participating principals and teachers, and analyses of student achievement data and student writing samples. Findings indicate that the program had an overall impact on the teachers, students, and school as a whole. However, teachers tended to focus more on the strategies and activities most emphasized in the workshops. Teachers need ongoing support and feedback to help them reflect on their teaching and its impact on student learning. The program also affected student behavior, in that students of all ability levels were more actively involved in and enthusiastic about learning. Finally, recommendations are made to develop multiple measures of student performance and to involve schools in making decisions about the evaluation of instructional programs. Five tables are included. (LMI)

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EVALUATING THE IMPACT AND INSTITUTIONALIZATION OF A SCHOOL RESTRUCTURING EFFORT

by

Rita M. Bean, Meryl K. Lazar, Naomi Zigmond
University of Pittsburgh

Lizanne DeStefano
University of Illinois at Urbana-Champaign

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Evaluating the Impact and Institutionalization of a

School Restructuring Effort

The demand for school reform or school restructuring can be heard at local, state, and national levels. At the same time, programs that profess to promote school change have been around for decades. These programs range from those that are subject based (how to improve mathematics instruction) to those that are school-wide in scope (e.g., Levin's Accelerated Schools). Yet despite public pressure and avowed strategies, school reform efforts are frequently undertaken without making the kind of impact that is expected or desired. Criticisms of change efforts include concern about fragmented, isolated projects; lack of sustained support or staff development; and inability to address systemic change (Fullan, 1992; Fullan & Miles, 1992). In this paper, we describe a project aimed at the latter issue, a project that approached school reform from a systems perspective.

During the past five years, the University of Pittsburgh, in collaboration with several school districts in the Western Pennsylvania area, has been involved in a restructuring effort, Project READ/Inquiring School. The primary goals of this initiative are: (1) to assist schools in building literacy programs that will enable students to become successful readers, writers, and thinkers, and (2) to promote systemwide change through professional collaboration across grades and shared decision making in curriculum planning. As we worked to implement and sustain this schoolwide reform effort, we struggled with ways in which we could assess the effect of our efforts on teachers, students, the schools, and the system as a whole. Indeed, we were challenged at times by our constituents who wanted to know what "proof" we had that this project was successful, e.g., would

scores of achievement tests improve? Our interests were somewhat different in that we wanted to learn more about ways in which a school change effort is institutionalized and how a university can best work to assist schools in making systemic, or second level changes (Cuban, 1990).

Foundation funding was received to conduct a large-scale evaluation of the Project READ/Inquiring School initiative. We were interested in determining (1) how the initiative affected classroom instruction and student performance; and (2) in what ways and to what degree the initiative was institutionalized, both in terms of changes in school structure and in the school's commitment to school/university partnerships. The evaluation design reflected a stakeholder-based, responsive-approach utilizing multiple data sources such as observations, document review, surveys, and group and individual interviews. The design allowed for input from central office administrators, building level administrators, program developers, teachers, and students. An external evaluator was employed to assist with the design, collection and analysis of data.

The Project: Project READ/Inquiring School

Background Information

Project READ/Inquiring School (PR/IS) is a restructuring initiative that combines two distinct components: an instructional model for enhancing the elementary and middle school curriculum (Project READ) and a process for encouraging teachers to engage in collegial activities focused on developing schoolwide program coherence and a schoolwide capacity to articulate the program (Calfee & Associates, 1989). The Project READ instructional model, designed a decade ago and described in a technical resource manual, The Book (Calfee, 1981) focuses on two themes: (1) a shift from the emphasis on basic skills to critical

literacy, and (2) a move away from teacher reliance on textbook lessons toward responsive instruction.

Project READ provides a model for thinking about literacy instruction. It defines, describes, and provides instructional ideas for four distinct literacy components: narration (stories), exposition (informational material), vocabulary development (words and ideas), and decoding-spelling. Teachers can use these components as a basis for designing instruction across all of the subject areas in elementary grades from reading and writing to the content fields. Another aspect of the Project READ model is the lesson framework which has the capacity to elicit higher levels of thinking as teachers become more familiar with the structure. Lesson design is comprised of an opening in which students are explicitly informed of what, how, and why they are learning something, a middle, a closing, and a follow-up. Four elements which serve to help teachers create the conceptual linkages within and between lessons are Connect, Organize, Reflect, Extend (Calfee, et al. 1992). These linking elements set the stage for moving the lesson from linear to inquiring. Students are connected to interactive learning tasks through use of organizational tools (visual organizers such as webs, venn diagrams, etc.) and they are pressed to justify thinking while creating tangible evidence of knowledge.

In learning about Project READ, students and teachers are encouraged to work in a collaborative manner with reflection and integration being the norm. Critical literacy and a common language with which to discuss lesson content, therefore, are key elements which create opportunities for dialogue within classes and across classes in schools. The interaction and opportunity for teacher empowerment that has been generated within school sites where Project READ has been implemented has given birth to the concept of the Inquiring School.

Successful implementation has occurred because the entire school has become immersed in the language and notions of Project READ. The focus of the change effort shifts from the classroom to schoolwide change. This systemic change is promoted through professional collaboration across grades and shared decision making in curriculum planning. This dimension of the PR/IS model focuses on helping schools to become more aware of and comfortable with processes they can use to enhance teacher decision making, communication, and cooperation. The principal thus has a critical role since time for faculty interaction must be provided and support and commitment to the model exemplified. Faculty are encouraged to spend time in faculty meetings discussing curricular issues and sharing their successes and problems in implementing Project READ.

The PR/IS Model then is built upon four assumptions; (1) the belief that all students can learn and become successful readers and thinkers if instruction is coherent, consistent, and engaging; (2) the belief that a curriculum of critical literacy, or the capacity to use language in all its forms to think and to communicate (Brown, 1991), is essential to achieving this goal; (3) the reprofessionalism of teachers and administrators, which presumes that teachers have the skills to become reflective about their instruction, can work collaboratively, and think as researchers in the classroom; and (4) the belief that change in schools results when all parties concerned are involved in the process and are focused upon changing the culture of the school.

The Western Pennsylvania Model

Project READ/Inquiring School was first implemented in the Western Pennsylvania region five years ago with four schools. Any school interested in joining the PR/IS Network agreed to send a critical mass of teachers (3-4) and the principal of the school to a series of four day long workshops held over the

course of a year at the University. These workshops included both informational presentations and opportunities for problem solving and networking in grade-alike groups. These sessions were designed and implemented by project staff which included teachers from the University Lab School. Teachers who were experienced with the model were also invited to present demonstration lessons (to actual classes) to teachers new to the model. School districts sent these teacher-presenters and their classes on buses to the University where they would teach their lessons, and then discuss the planning and implementation of those lessons with workshop participants. Teachers new to the model received followup technical support from University personnel 2-3 times/month for the school year. Also, teachers who had attended workshops in previous years could take advantage of the technical support.

Technical support was provided by University Lab School teachers and graduate students who were experienced teachers who had gone through the workshop training and were knowledgeable about PR/IS. Lab school teachers functioned as a resource upon request. In addition, one graduate student was assigned to one or two schools for a one or two year period and served as the on-going university liaison to that school. Although there were some differences in roles, depending on the needs of the individual schools, the primary responsibilities of the liaison included: (1) providing support to teachers by meeting with them individually or in small groups, conducting demonstration lessons or on-site workshops; and (2) collecting data for evaluation purposes.

Each year, we also provided for one large meeting during which experienced teachers shared ideas and raised questions. Moreover, teachers at the various schools often led workshops for their peers or participated in problem-solving sessions.

The Sites

The Project READ/Inquiring School Initiative in Western Pennsylvania has been implemented in 21 schools with 178 classroom teachers and 22 resource teachers (e.g., Chapter 1, librarians, guidance counselors) during a four year period (1988-1992). The eleven schools from eight districts currently in the program present a diverse array of public and private settings, ranging in size from 300 students to over 39,000 students. Of the ten public school settings, five have a state aid ratio which exceeds the average, indicating the need for additional state revenues to sustain education. Across sites, district achievement averages range from well above to well below the state median on standardized test scores. The percentage of non-white students varies across districts from 0% to 90% with a mean of 28%. The percentage of students enrolled in Chapter I reading programs ranges from 9% to 75% across districts with an average of 24% (See Table 1).

Insert Table 1 about here

Percentages of teachers within schools who completed PR/IS workshops ranged from a low of 13% to a high of 97%, and in 7 of the participating schools, 50% or more of their teachers had gone through the workshop series.

Methods

In order to address the impact that the PR/IS initiative had on the schools, we designed an evaluation plan that solicited data from a number of different sources, using various data gathering techniques. Our expectation was that we would be able to determine the impact of our initiative on student behavior, student performance, and teacher behavior in the classroom. We also

made efforts to assess ways in which the initiative had changed the school as a whole. We were interested in obtaining information from participants about what aspects of the initiative had become an integral part of their school life, that is, had become institutionalized. In Table 2, the primary data sources for our evaluation plan are listed, and each of the sources is described more fully below.

Insert Table 2 about here

Observations

In order to determine how closely classroom instruction aligned with the approaches advocated by the initiative, we developed an observational system that enabled us to code and analyze our observations of classroom practices. This observational checklist was developed based on the identified lesson framework of Project READ and included a list of various elements that observers would expect to see as they observed in the classrooms. Trained observers took field notes which were later transcribed. Based upon these transcripts, an observational checklist was completed, thus providing us with information as to which lesson components were most frequently implemented, the extent of use of the model in the various subject areas, and across grade levels. To determine reliability, a second coder reviewed the field notes and completed the checklist for 30% of the lessons observed during 1990-91. The percent of agreement between the first and second coders was .85.

Over a two year period (1990-1992), we observed 139 lessons in classrooms K-6 in 11 different schools. During the 1990-91 school year, teachers were informed that university liaisons would be coming in the spring to visit and

observe classroom lessons for two or three consecutive days. Each liaison independently scheduled mutually convenient days and times. Thirty six different teachers were observed teaching a total of 93 lessons. Of the 93 lessons, 54 were at the primary level and 39 at the intermediate level. Lessons were in reading (55), social studies (12), health (4), science (8), English (12), and math (2). (See Table 3.)

During the 1991-92 school year, we asked teachers to volunteer to be observed teaching lessons in one subject area on two consecutive days. This change from observing every teacher who was going through the set of workshops to a volunteer procedure was made because teachers from two schools indicated their displeasure with the required observations, indicating that they felt the observations were not a source of helpful feedback, but rather more evaluative in nature. Given that we were very much interested in maintaining a positive relationship with teachers in those two schools and that we had a large data set from the previous year, we agreed to the request that we ask for volunteers. We observed 48 lessons of 28 teachers. Twenty four lessons were at the primary level and 22 at the intermediate level. The majority of lessons were in the area of reading (38), but we also observed several lessons in social studies (3), English (2), and math (3). (See Table 3)

Insert Table 3 about here

Focus Groups

We conducted focus group sessions with three groups of teachers each from a different school district; a group of superintendents/central office personnel representing five different districts; and a group of principals representing

five different schools (a total of five focus group sessions). The districts represented in the focus groups included one large city system, a middle sized city system and five small districts.

Only teachers who had taught using the techniques of PR/IS for at least one school year were eligible to attend the focus group meetings since we were interested in obtaining information about what these teachers continued to use from the model months after the workshop sessions.

The focus group interviews enabled us to bring together a purposive sampling of teachers who had been implementing the PR/IS model for at least a year and to explore their thoughts and feelings about the model. The group interviews enabled us to obtain a great deal of data from a larger number of individuals than we could have obtained from individual interviews. Moreover, we were interested in the interactive data gathered through these group situations. The interviews were led by our external evaluator, who met with us to develop the questions that would be used to guide the focus group discussion. Each interview session was held for approximately one and one half hours. The primary questions used with teachers included the following: How do you describe/define an Inquiring School? What is the impact of this initiative on teacher behavior? Student behavior? What concerns or problems are associated with implementation or continuation of the model? Any suggestions or recommendations to the university in regard to staff development and support? The primary focus with central office administrators and principals was on how they encouraged and sustained change in their schools. They were also asked to assess the nature and extent of impact of Inquiring School and the benefits of school/university collaboration.

Individual Interviews

Since implementation began, interviews were held with teachers and principals at the end of each year of training. This past year, project staff from the University conducted individual interviews with school principals, previously trained teachers, and teachers who had just completed the workshops. Of interest were teachers' and principals' perceptions of the effect of the initiative on classroom instruction, the classroom environment, the school environment, and teacher communication.

Achievement Test Data

When we first began this project, we had decided that we would rely on the achievement test data available in the schools, given our limited resources and desire to remain unobtrusive. For this evaluation project, therefore, we collected individual and school level standardized achievement test scores from two schools that had been in the project more than two years and where at least 50% of the teachers had gone through the workshop training. We analyzed the reading and math scores of individual students who had been in the classroom of experienced PR/IS teachers for two or three consecutive years, and compared their scores with all other students at the same grade levels in each of those schools.

Composing Activity

Given our interest in the effect of the initiative on student performance, and our belief that standardized test data were inadequate as a sole means of assessing the impact of the PR/IS initiative, we designed a classroom study to determine how students used the strategies and organizational tools of Project READ, and the impact of these strategies on the resulting compositions. University staff, in collaboration with one of our participating teachers, designed a set of writing activities that was undertaken with two classes of

fourth grade students. One class, the high implementation group, had worked throughout the year with a teacher who had become quite proficient with the Project READ model and had used it extensively. The other class worked with a teacher who, although knowledgeable of the model, did not use it extensively in her classroom. They comprised the low implementation group. Both groups participated in a two-day whole group writing activity taught by the teacher of the high implementation group. On day one, students in each group engaged in a whole class prewriting activity which focused on generating ideas, creating a web, and developing categories using words from the web. The purpose was to help students organize their ideas prior to writing. On day two, both groups of students were given a similar prompt, however, the teacher-directed prewriting activity was eliminated and students were merely told to write a paper, leaving organization to their discretion. We also observed students' behavior during these activities. At the close of day two, a small group of students from each of the classes was selected to discuss their responses to the activity. They were asked to describe the process they used for completing the assignment, and whether they used any organizing techniques before or during their writing. Students were targeted by the teacher as representative of different reading abilities (based upon achievement test scores). The responses of students provided us with information about how they internalized the techniques and strategies that they were learning.

The writing samples generated by the students on day two were analyzed using the Langer (1992) model of prose analysis. We were able, using this prose analysis system, to identify various levels of complexity in the expository writing of the students.

Findings

In this section, we present our findings relative to the impact of the Project READ/Inquiring School on teacher behavior, student behavior, student performance, and school change.

Teacher Behavior

Analysis of our classroom observations permitted us to determine which aspects of the model teachers implemented and the relative frequency of activities associated with the model. Also, we were able, for the 1990-91 school year, to determine the extent of use of the model across various content areas. Of the 93 observations conducted across the eight school districts during the 90-91 school year, 38 (42%) were content area lessons which indicated that teachers were implementing Project READ notions across the curriculum. Content areas in which the model was observed most frequently were social studies and English (See Table 3). Our results also indicated that teachers at both primary and intermediate levels were using dimensions of the Project READ framework.

Our results indicate that the model was used in both primary and intermediate classrooms in both reading and content area lessons. Of the 139 total lessons observed, 78 (56%) were at the primary level and 61 (44%) were at the intermediate level. Lessons were observed in reading (93 lessons) and in the content areas (46 lessons). Content areas in which the model was observed most frequently were social studies (15 lessons) and English (14 lessons).

Table 4 presents a summary analysis of the classroom observations for 1990-1992. The most widely implemented aspects of the model were: explicit statements by teachers of a lesson focus; making connections to prior knowledge; active student involvement; and use of graphic aids to present material. The least frequently found elements were: teacher responses to student reflections;

summary discussions at closure of lessons. Teachers were designing and teaching lessons that generally were reflective of the framework proposed in the PR/IS initiative although they implemented some aspects of each component more frequently than others. For example, while opening activities were quite frequently implemented, they rarely included one important aspect: stating the rationale. When asked why this was so, teachers reported that it was difficult to state the rationale for some lessons.

Insert Table 4 about here

Results of our focus group interviews enhanced the observational data. Teachers, principals, and central office administrators reported that involvement with the PR/IS initiative had changed the instructional environment and teacher behavior in their schools by decreasing teacher reliance on basal texts, teachers' manuals, dittos, and worksheets; increasing the use of student generated and teacher made materials; increasing cooperative learning and small group activities; and increasing opportunities for student compositions.

Moreover, the ability of teachers to discuss in a coherent, articulate manner how they were making changes in their classrooms reflected the effect of the model on teacher behavior. Teachers in the focus groups felt that as a result of their involvement in PR/IS they were more enthusiastic and excited about teaching, more reflective and more involved in instructional decision making. These teachers discussed ways in which they thought about the content they were presenting and their objectives so that they could make decisions about how best to present that content to students. Teachers expressed the view that they were collaborators with students in the learning process and indicated that

by monitoring student reactions, attention, enthusiasm, and level of participation, they could assess learning and use this feedback to change instruction.

Teachers expressed the view that they were more in control of what was to be taught and that PR/IS gave them a "common language" that they could use to share ideas and activities with others. The focus on PR/IS as the model of instruction for the entire school also gave them the impetus as well the language to collaborate with others in their building.

The comments of principals and central office staff substantiated the views of teachers regarding changes in teacher behavior. Principals expressed the view that they saw fewer problems with classroom management and they attributed this to the fact that students were more actively involved in lessons. Principals indicated that as a result of PR/IS, classrooms looked physically different because of the many displays of student work which incorporated the various graphic organizers used for learning. For example, in one school, during Black History Month, there were visual organizers identifying common characteristics among those who have distinguished themselves as leaders. In another school, students made graphics of playground equipment that they wanted to see included in a proposed playground renovation. They also wrote justifications to accompany their graphics. In one intermediate classroom, the teacher developed a visual that summarized the content of each basal story students read throughout the year. Each time a story was completed, a new car was added to the "story train."

Student Behavior

One powerful finding based on analysis of the observational data was that in PR/IS classrooms students were actively involved in their own learning in 86% of the lessons observed. Results of our focus group discussions reinforced the

findings of the observations. Parents, teachers, principals and central office administrators all agreed that the most important outcome associated with the Project READ/Inquiring School initiative was increased student involvement in their own learning. Another perception voiced in the focus groups and substantiated by the observations was that all students, regardless of ability, were actively involved. Groups made specific comments about the positive effect of the model on the involvement of low achieving students. As one teacher expressed, "normally nonreaders are trying to shrink away from what we are doing, but in Inquiring School all of my students wanted to make their mark somewhere and have input, even the nonreaders." Another teacher commented, "They (slow students) want to participate; they have good thoughts and good ideas."

Participants in the focus group attributed some of this active involvement to the graphic organizers that were used in lessons that enabled slower students to become contributing members of the class. On the other hand, teachers also reported that the novel organization of lesson material provided more able students with greater opportunities for creative thinking than traditional instruction. As one teacher noted, "I don't think most kids, even the real high ability kids would think about a story in that way unless they've been taught to...it creates new ways of thinking."

Student Performance

Our analysis of individual student data, for a small number of students who had been with an PR/IS teacher for several years, indicated that in all cases, students who had participated in the model achieved at a comparable or greater level when compared with grade level peers. Specifically, in School A, the 17 second graders and 21 third graders who had participated in the initiative for two years made similar gains in reading when compared with grade level peers.

Likewise, the achievement test scores of seven students who had been in the initiative for three years (since second grade) were similar to grade level peers. In School B, 17 third graders who had been in the initiative for two years, made greater gains in reading in comparison to a comparison cohort of grade level peers (See Table 5).

Insert Table 5 about here

Although our data do not indicate significantly greater performance on standardized test scores for students who had been in the initiative for several years, these students did achieve as well as other students in an environment that, in our view, provides more meaningful and constructive experiences. Further, it may be that PR/IS affects student performance in areas that are not well measured by standardized tests.

Writing Activity

Our concern that standardized test data did not adequately represent the impact of PR/IS, and the belief on the part of teachers that their students were behaving differently because of the model, led us to design a study to determine whether students used ideas from the model in their own work.

Results of the writing activities, described earlier, indicated the following differences between students from the high implementation fourth grade classroom and those from the low implementation four grade classroom. Writing samples of students from the high implementation classroom contained more examples of sophisticated topic development, as evidenced by a higher frequency of statements supported by detail and greater overall elaboration of ideas. Fifty-two percent of the students in the lower implementation classroom used

simplistic topic development and simple sequence or descriptive listing, while only twenty-eight percent of those in the higher implementation group used this simple form of writing. After the writing activity, students from the high implementation classroom were found to be more aware of their own decision making and organizational processes and better able to verbalize their writing behaviors than students in the low implementation classroom. We suspect that experiences with the PR/IS model that encourage reflective thinking were internalized by students from high implementation classrooms and used by them as they participated in the writing activities.

School Change

Individual interviews with principals, focus group interviews, and records of school visits and activities provided us with data that led us to the following findings about institutionalization. Both principals and central office personnel were emphatic that although university involvement was critical as an aid to professional development and implementation, they would continue to use and expand the PR/IS initiative in their districts without university support. Principals of five schools indicated that PR/IS had become the instructional model for their schools, and that other programs such as cooperative learning and mainstreaming initiatives were selected and integrated into the school based on their compatibility with PR/IS. Principals indicated that the effect of having one program that provided a coherent framework within which other activities could fit, enabled teachers to feel less fragmented and frustrated when they were faced with a multitude of separate initiatives in their schools.

Administrators cited several strategies they used to promote system change. In 10 of the 11 schools, administrators held workshops for their entire faculties

that provided additional experiences and knowledge about the initiative so that all staff would become familiar with the project. Often, the experienced teachers served as leaders of these staff development sessions. In one of the schools, the principal obtained funds that enabled his teachers to participate in a peer coaching program. In some schools, teachers observed each other teaching PR/IS lessons and discussed the effectiveness of lessons, using the language and lesson framework of the Inquiring School as an organizing strategy.

Teachers from several of the schools have made presentations to professional groups and to school boards about the effect of the PR/IS on their school and on their classroom. Teachers have also generated and sustained the network established at the workshops by visiting each other's schools and exchanging ideas via phone and mail. Faculty from the University Lab School have gone to all of the participating schools to present workshops, do demonstration lessons, and talk with teachers about the initiative.

One of the most powerful aspects of institutionalization has been the discussion by teachers about how important it is that teachers at higher grade levels, including the middle school, understand the instructional implications and language of the Inquiring School model. They have seen how students become more and more familiar with various aspects of the model from year to year, and can use the language to talk about structures (webs, weaves) and learning. It is their perception that students would be better served if middle school classrooms valued and promoted the use of these strategies.

One of the reasons for institutionalization has been the solid support of the principals for the PR/IS initiative. Principals, to become knowledgeable about the model, participated in the workshop sessions, and attended meetings of the principals held on a regular basis at least several times each year.

Principals found the funds necessary for obtaining substitutes and for workshop fees. They interacted with University staff on a regular and frequent basis, and were not hesitant to call if their teachers had concerns or needs. Our view was that this principal support was a critical factor in the institutionalization of the initiative. Principals were a source of encouragement to University staff. When funds were low or there were difficulties with implementation, they provided us with ideas about how to make the model work.

Principals also promoted the model within their own districts through their interactions with central administration and school boards. Thus, in three of our districts, the model has spread so that it is used in all of the elementary schools in the districts. One of our principals, in sharing her thoughts about the Project READ/Inquiring School, with the local Rotary Club, exemplifies her understanding of the strength and purpose of the initiative, as well as her commitment to it:

> The Inquiring School is one that brings to our faculty new knowledge about the art of teaching, a framework for sharing information with colleagues, and methods to help develop an inquiring attitude in our students. The model is a coherent program that stresses problem solving and thinking skills.... frees the teachers from relying on presenting materials only as the textbook publisher recommends ....encourages students to think about the way they themselves think....to determine what works best for them....the techniques transfer well across all subject areas....through networking with Universities

and with other school districts, your schools are making maximum use of our scarce economic resources ....Education isn't what it used to be. It's much better.

Conclusions

Our evaluation of the Project READ/Inquiring School initiative, completed over a five year period, indicated that the project has had an overall impact on the teachers, the students, and the school as a whole. Teachers have been able to use many of the strategies and ideas presented in the workshop sessions; at the same time, other dimensions of the initiative have not become an integral part of their classroom repertoires. What we have learned is that teachers have tended to focus on strategies and activities most emphasized in our workshops. The less concrete notions and those that require the most change on the part of the teachers were found less often. The importance of ongoing support and feedback for teachers was substantiated through our evaluation. In other words, the workshop sessions and technical support provided during the first year of participation was essential but not sufficient. There was a need for continued staff development that would enable teachers to become more familiar with the model, to extend it beyond reading and writing instruction, and most importantly, to be able to reflect on their own teaching and its impact on student learning. This finding has serious implications for our set of workshops. We have already incorporated more opportunity for teachers to observe and participate in activities which require reflection during these workshops. We have also focused on modeling lessons that show teachers how to make connections between what students know and the new learning. One addition has been a discussion of transcripts of lessons that exemplify various strategies, e.g., showing how

teachers have connected to previous instruction in different subjects or to student knowledge or how they have effectively closed a lesson.

Our results also indicate that there was a change in student behavior given implementation of the Project READ/Inquiring School initiative. Students of all abilities were more actively involved in instruction, and according to teachers, students of all abilities were more excited and enthusiastic about learning. Moreover, the model appears to have an effect on teacher expectations about students with lower abilities; that is, teachers were pleased with the high level thinking of these students. The classroom action research project gave us some positive feedback about students' abilities to discuss in an articulate and coherent manner the effect of the initiative on how students think and learn.

Achievement of students who have been in the classrooms of teachers familiar with the initiative has been positive. Students have done at least as well as, if not better than, other students. Given that the norm referenced tests are neither a sufficient nor appropriate means of assessing the goals and activities of our initiative which stresses problem-solving and higher level thinking skills rather than knowledge growth, we are optimistic. Moreover, the results of the writing samples, although limited to a comparison of two classrooms, indicate the power of the initiative over time as a means of influencing the quality of student writing. Again, our results indicate the need for more systematic study of student performance, using multiple measures. It also suggests the need for involving schools in making decisions about how they will evaluate any instructional programs; that is, helping them to mine the data that are available, from classroom assessment techniques to the yearly results from standardized tests.

Our results about institutionalization have led us to conclude that the initiative has had an impact on the school as a whole. All teachers in the schools, whether they had gone through the workshop experiences or not, and familiar with the model, used the language to discuss instructional programming, and to some degree used various aspects of the model in their classrooms. Moreover, the model has provided a focus for inservice activities and interaction among teachers. Teachers talked about the model and their students' reactions to it. They shared ideas that worked--and did not work. They have encouraged the university to expand its involvement by providing additional experiences on-site with teachers who had gone through the initial set of workshops, and by developing a teacher preparation program that prepares new teachers as Project READ/Inquiring School teachers. Most importantly, they have generated new ways and ideas for thinking about the initiative.

The evaluation of the Inquiring School Initiative has been an important process. Not only has it provided participating schools with a source of feedback regarding the impact of the model, but it has also provided meaningful feedback to the designers/implementers of the initiative. We have learned a great deal about how we might more effectively work with the schools. We have information that will help us as we plan our workshops and move us to develop a program that focuses on more advanced experiences for our participating teachers. The evaluation provides a basis for discussion with our principals and superintendents about instruction in their schools, assessment tools and how they are used for evaluation purposes, and the university's role in school improvement efforts.

In conclusion, we have learned a great deal about the results and impact of our initiative, but we have learned even more about what makes school reform

work. The evaluation has provided us with important information about the substantive aspects of the Project READ/Inquiring School initiative, and has also given us the necessary "next" steps for how we can build on our past efforts.

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Table 1. Demographics of Schools Currently in the Project READ/Inquiring Schools Network

District / School	Number of students in district, 1989-90	Economic disadvantage State Aid Ratio	Chapter 1 Reading Percent of students enrolled				Years in Inquiring Schools	% of teachers trained by 1991-92
			Grade 3		Grade 5			
			1989-90	1990-91	1989-90	1990-91		
1 / A	1,063	above average	21	18	15	14	2	25%
2 / B	3,027	above average	26	26	16	16	2	54%
2 / C			9	17	5	12	3	69%
2 / D			14	10	20	21	3	75%
3 / E	289	NA	NA	NA	NA	NA	5	94%
4 / F	5,000	above average	12	13	NA	NA	4	83%
5 / G	39,217	average	75	21	55	24	3	97%
6 / H	4,639	average	22	21	20	17	2	33%
7 / I	2,155	above average	14	1	25	1	4	50%
7 / J			13	4	14	17	3	30%
8 / K	2,083	above average	29	39	16	23	2	13%

Table 2. Sources of Data for Project READ/Inquiring Schools Evaluation

	Teacher Behavior (Classroom)	Student Behavior	Student Performance	School Change
Observations	X	X		
Reading (n=93)				
Content Area (n=46)				
Interviews				
Focus Group (n=5)	X	X	X	X
Individual Teacher & Principal (n=53)	X	X	X	X
Achievement Test Data			X	
Composing Activity		X	X	

TABLE 3. Observations Conducted in Classrooms from 1990 - 1992

	1990 - 1991										1991 - 1992									
			Lesson Types						Grade Level				Lesson Types						Grade Level	
School	# Teachers Observed	# Lessons Observed	Rdg.	SS	Health	Sci	Eng	Math	P	I	#Teachers Observed	#Lessons Observed	Rdg.	SS	Health	Sci	Eng	Math	P	I
A	1	2	2						0	2	2	2		1				1	0	2
B	3	7	1	3	3				3	4	2	4	4						0	4
C	2	6	4	1			1		3	3	2	4	4						2	2
D	2	6	1		1	3	1		3	3	1	2	2						2	0
E	0	0	0						0	0	5	10	6	2				2	8	2
F	7	20	10	4		1	3	2	9	11	6	12	10				2		6	6
G	5	15	8	1		1	5		12	3	3	4	4						2	2
H	5	15	14				1		9	6	3	4	4						2	2
I	3	7	6				1		4	3	3	3	3						1	2
J	3	9	6	2		1			6	3	0	0							0	0
K	5	6	3	1		2			5	1	1	1	1						1	0
Totals	36	93	55	12	4	8	12	2	54	39	28	46	38	3	0	0	2	3	24	22

Table 4. Analysis of Inquiring School Lessons Obtained from Observations (1990-91 and 1991-92 School Years)

Within the opening:

88% the lesson focus is stated
36% the rationale is stated
77% the means of accomplishing the lesson goal is stated
72% appropriate connections are made to (underline all that apply): a previous lesson, previous assignment, personal experience, another story, a content text, another visual.

Within the middle:

73% lesson organization is a clear outgrowth of stated focus
68% organization is logically developed and sequenced
72% appropriate connections are made to (underline all that apply): a previous lesson, previous assignment, personal experience, another story, a content text, another visual
72% lesson stays with the stated focus and does not digress
72% organization offers opportunities for guided and independent practice
90% a graphic organizer is used
70% if graphic organizer used, it is appropriate and a logical outgrowth of the lesson organization
86% lesson organization encourages active student involvement
48% teacher facilitates integration of lesson content by (underline all that apply): making thoughtful statements about application of lesson material, visual used, connections to other classroom work
37% teacher facilitates thoughtful discussion of lesson content with students enabling student-initiated reflection
20% teacher gives thoughtful responses to student reflections and encourages further student/teacher discussion of material

Within closing:

62% information covered within the lesson organization is summarized solely by the teacher, teacher initiated with student response elicited by the teacher , student initiated with teacher input
29% thoughtful summary discussion in which lesson content is connected to: a previous lesson, previous assignment, personal experience, another story, a content text, another visual, future lessons.

Within the follow-up:

59% lesson follow-up: is discussed and/or assigned, connections with current lesson organization are made clear to students, rationale for follow-up is stated, creates a bridge for future learning

Table 5. **Metropolitan Achievement Test raw scores and StanfordAchievement Test scale scores of Students who Were in Classrooms of Experienced Inquiring School Teachers and those of other Students in that School**

School A

Group 1: Two Years in Inquiring School Classrooms

		MAT Raw Scores			
		Reading		Math	
	n	Grade 2	Grade 3	Grade 2	Grade 3
		1991	1992	1991	1992
Target Students	17	70	73	49	55
All Students	61 ('91), 60 ('92)	72	75	56	58

Group 2: Two Years in Inquiring School Classrooms

		MAT Raw Scores			
		Reading		Math	
	n	Grade 3	Grade 4	Grade 3	Grade 4
		1991	1992	1991	1992
Target Students	21	77	90	61	75
All Students	79 ('91), 73 ('92)	76	90	58	73

Group 3: ThreeYears in Inquiring School Classrooms

		MAT Raw Scores					
		Reading			Math		
	n	Grade 2	Grade 3	Grade 4	Grade 2	Grade 3	Grade 4
		1990	1991	1992	1990	1991	1992
Target Students	7	83	77	94	59	64	78
All Students	60 ('90), 79 ('91), 73 ('92)	78	76	90	56	58	73

School B

Group 1: Two Years in Inquiring School Classrooms

		SAT Scale Scores			
		Reading		Math	
	n	Grade 3	Grade 4	Grade 3	Grade 4
		1990	1991	1990	1991
Target Students	17	607	639	609	628
All Students	106 ('90), 106* ('91)	612*	634	609*	623

*estimated